

hook and loop type fastener with an epoxy resin, i.e. a thermosettable composition, which is coated on the fastener.

In contrast, the fastening surface and/or the complementary fastening surface of the present invention are made from a combination of a thermosettable composition and a thermoplastic composition. Applicants point out in the Specification, page 12, lines 7-10, that "the curable material is not merely an additive (e.g., a curable adhesive) that is applied as a separate component in a mechanical fastener system at or near the time that fastening is desired. Advantageously, the curable material is an integral part of the curable mechanical fasteners of the invention."

Cohen fails to disclose a hook and loop fastener in which the fastener or the complementary fastening surface is fabricated from a curable material, i.e. a thermosettable/thermoplastic mixture. Thus, Applicants respectfully request that the rejections under 35 U.S.C. § 102(b) should be withdrawn.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 6-12 are rejected under 35 U.S.C. § 103(a) as obvious over Cohen (USPN 4,239,829). The Examiner states the use of an epoxy resin material of Cohen in combination or conjunction with a compatible thermoplastic material is obvious to those of skill in the art.

Applicants respectfully traverse the rejection. The present rejection of the pending claims does not set forth a case of *prima facie* obviousness. Referring to §706.02(j) of the M.P.E.P, a rejection under 35 U.S.C. §103 must meet three basic criteria:

- (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings;
- (2) there must be a reasonable expectation of success;
- (3) the prior art reference (or references when combined) must teach or suggest all the claim limitations.

Moreover, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Applicants' disclosure.

Cohen does not teach or suggest making the fastening surface from a thermosettable material and a thermoplastic material. The epoxy resin of Cohen is not the same as the thermosettable material of the present invention, rather Cohen's resin is an additive external to the hook and loop fastener. In contrast, in the present invention the fastener itself is prepared from the thermosettable material and thermoplastic material.

Claims 6-12 are additionally rejected under 35 U.S.C. § 103(a) as obvious over Cohen (USPN 4,239,829) in view of Flynn. The Examiner states that Flynn reinforces the position that it is known in the art to include a thermoplastic material as a "usual modifier" to an epoxy resin such as that used in Cohen.

For the reasons stated above, Flynn does not cure the deficiencies of Cohen as a reference. As Cohen does not teach making the fastener itself from a thermosettable material, Cohen cannot be combined with a reference that teaches mixtures of thermosettable materials with thermoplastic material to arrive at the present invention. Even if, for the sake of argument, Cohen did include a modifier that could be considered a thermoplastic material (which Cohen does not teach or suggest), Cohen only discloses the epoxy resin as a coating or additive on the hook and loop fastener. Cohen fails to teach or suggest making the fastener out of a combination of a thermoplastic/thermosettable composition.

Further, Flynn fails to teach or suggest the mixtures of thermosetting resins and thermoplastic materials of the present invention. Flynn teaches composites made by preparing a solution of epoxy resin and hardening agent with a reinforcing material which is a web strand or roving material, and flashing off the solvent. The resultant composite generated is tack free. Thus, one skilled in the art would not look to Flynn in the application of Cohen's epoxy resin to a hook and loop fastener. Further, Flynn's disclosure of additives such as polyolefin powders are referenced for adding specific properties to the epoxy resin, such as flexibilization, reinforcing, fillers, etc., and do not teach the use as a thermoplastic in combination with an epoxy resin to make a fastener.

Cohen fails to disclose a fastener made from a thermosettable/thermoplastic combination either alone or in combination with Flynn. Applicants respectfully request that the rejections under 35 U.S.C. § 103(a) be withdrawn.

Conclusion

In view of the arguments and amendments offered herein, Applicants respectfully submit that the Examiner's grounds for objection and rejection are overcome and respectfully solicit reconsideration and withdrawal of the rejections to place the application in condition for allowance.

Respectfully submitted,

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1. (Twice Amended) A curable mechanical fastener comprising:
a fastening surface comprising a curable material, and complementary fastening surface,
wherein the curable material comprises a combination of at least one thermosettable composition and at least one thermoplastic composition; and
wherein the fastening surface is capable of being repeatedly attached and unattached to the complementary fastening surface, and wherein the fastening surface is capable of becoming permanently attached to the complementary fastening surface when cured.
7. (Amended) The curable mechanical fastener of claim 1 [6], wherein the thermosettable composition comprises at least one thermosettable material selected from the group consisting of (meth)acrylates, urethanes, ethers, epoxies, cyanates, esters, phenolics, polyimides, amine formaldehyde condensates, and mixtures thereof.
8. (Amended) The curable mechanical fastener of claim 1 [6], wherein the thermosettable composition comprises an epoxy.
9. (Amended) The curable mechanical fastener of claim 1 [6], wherein the thermoplastic composition comprises at least one thermoplastic material selected from the group consisting of polyesters, polyolefins, polyamides, polyethers, polyurethanes, plasticized polyvinyl chloride, thermoplastic elastomer block copolymers, phenoxy resins, polyketones, silicones, polyetherimides, polycarbonates, polysulfones, polyoxides, and mixtures thereof.
10. (Amended) The curable mechanical fastener of claim 1 [6], wherein the thermoplastic composition comprises a polyester.
12. (Amended) The curable mechanical fastener of claim 1 [6], wherein the thermosettable composition comprises an epoxy and the thermoplastic composition comprises a polyester.
26. (Amended) A multi-part curable mechanical fastener, comprising:

a first part comprising a fastening surface;

a second part comprising a complementary fastening surface that complements the fastening surface;

wherein at least one of the fastening surface and the complementary fastening surface is at least partially fabricated from a curable material comprising a combination of at least one thermosettable composition and at least one thermoplastic composition, such that when the fastening surface is mechanically attached to the complementary fastening surface, the multi-part curable mechanical fastener is capable of being cured to provide a permanent fastener.